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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/695,679	10/24/2000	Sakhrat K. Khizroev	284867-00005	3444

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PITTSBURGH, PA 15219-6404

EXAMINER

DAVIS, DAVID DONALD

ART UNIT	PAPER NUMBER
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2652

15

DATE MAILED: 05/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/695,679

**Applicant(s)**

KHIZROEV ET AL.

**Examiner**

David D. Davis

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

*Response to Amendment*

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

*Claim Rejections - 35 USC § 112*

2. Claims 7 and 8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specially, a recording head is set forth in claims 2, 7 and 8. However, in claims 7 and 8 read heads are recited. As a result, it is unclear how a read head can be a recording head.

3. Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification states that a “main pole made by lithography typically cannot be made narrower than 300 nm”, and “using a material deposition process such as sputtering instead of lithography, the width A **can be made significantly narrower**”. Emphasis added. The specification does not quantify “significantly narrower”.

However, a track width that “does not exceed 300 nm” is recited in claim 9, which includes every nanometer up to and approaching zero. The specification does not enable a

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skilled artisan to make and/or use a magnetic head with a track width not exceeding 300 nm.

The specification only provides enablement for 300 nm, and some yet-to-be-determined width that is noticeably narrower.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 2-6 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Lazzari (US 4,837,924). Lazzari shows in figure 6 a recording or write head including nonmagnetic substrate 10 having a surface oriented in a plane substantially parallel with tracks of a magnetic recording medium. Figure 6 also shows main pole 16 including magnetically permeable material on the surface of the substrate.

As the claims are directed to a recording head, per se, the method limitations appearing in line 4 and 2 of claims 2 and 3, respectively have only been accorded weight to the extent that they affect the structure of the completed recording head. Note that "[d]etermination of patentability in 'product-by-process' claims is based on product itself, even though such claims are limited and defined by process [i.e., "plated", "electroplated"], and thus product in such claim is unpatentable if it is the same as, or obvious form, product of prior art, even if prior product was made by a different process", *In re Thorpe, et al.*, 227 USPQ 964 (CAFC 1985). Furthermore, note that a "[p]roduct-by-process claim, although reciting subject matter of claim in

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terms of how it is made [i.e., "plated", "electroplated"] is still product claim; it is patentability of product claimed and not recited process steps that must be established, in spite of fact that claim may recite only process limitations", *In re Hirao and Sato*, 190 USPQ 685 (CCPA 1976).

Figure 6 of Lazzari also shows nonmagnetic substrate 10 defining a step topology within the recording head. Additionally show in figure 6 is electrically conductive coil 20 adjacent to main pole 16. Coil 20 is electrically connected with a power supply.

In column 3, lines 40-43 Lazzari discloses that main pole 16 is made from the material Ni/Fe.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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8. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lazzari (Us 4,837,924). Lazzari discloses the claimed invention. However, Lazzari is silent as to read heads. Lazzari is also silent as to a track width of 300 nm.

Official notice is taken of the fact that read heads, such as magnetoresistive (MR) and giant magnetoresistive (GMR) are notoriously old and well known in the magnetic head art.

Official notice is taken of the fact that lithography and production of a 300 nm track width utilizing lithography is notoriously old and well known in the magnetic head.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to utilized a read head such as an MR or GMR head in the head of Lazzari as suggested in the magnetic head art. The rationale is as follows: one of ordinary skill in the art at the time the invention was made would have been motivated to utilize a read head, such as an MR or GMR, which is well within the purview of a skilled artisan and absent an unobvious result, so as to provide head able to reproduce information on a magnetic disk at a higher density.

It also would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the head of Lazzari with a track width of 300 nm utilizing lithography as taught in the art. The rationale is as follows: one of ordinary skill in the art at the time the invention was made would have been motivated to provide a track width of 300 nm utilizing lithography, which is well within the purview of a skilled artisan and absent an unobvious result, so as to provide a narrow track width able to read and/or write information to and from a disk since a 300 nm track width is obtainable through a readily used process such as lithography.

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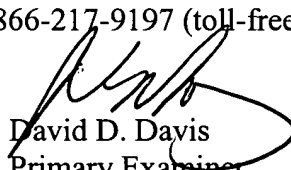
***Response to Arguments***

9. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Davis whose telephone number is (703) 308-1503. The examiner can normally be reached on Monday thru Friday between 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
David D. Davis  
Primary Examiner  
Art Unit 2652

ddd